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Original Research Article

Clinical pattern of cutaneous infestations in pediatric age group attending a tertiary care centre

Raghavon U. N.*, Neela V. Bhuptani, Bharti K. Patel, Sagar Bhimani

Department of Dermatology, PDU Govt. Medical College and Hospital, Rajkot, Gujarat, India

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***Correspondence:**
Dr. Raghavon U. N.,
E-mail: raghavon7@gmail.com

ABSTRACT

Background: Skin diseases are a serious health concern for children of all ages, and they are linked to a high rate of morbidity. In comparison to adults, children's dermatological problems are more impacted by socioeconomic position, dietary habits, climatic exposure, and the external environment. The purpose of this study was to determine the prevalence of infestations among pediatric patients who visited the dermatology outpatient department in a tertiary care hospital.
Methods: From December 2019 to September 2020, all newly diagnosed, untreated male and female pediatric patients (from neonates to adolescents of 14 years of age) attending dermatology outpatient department (OPD) were assessed to determine the prevalence of Infestations within the pediatric population. A thorough history was gathered, followed by a meticulous dermatological examination and if indicated, regular investigations were done and were recorded in predesigned performa.
Results: The analysis included 50 patients who had been infested. There were 43 cases (86%) of scabies and 7 cases (14%) of pediculosis capitis.
Conclusions: The infestations in the pediatric age group are associated with a high communicable rate so it's important to diagnose these conditions early to contain the spread and limit the morbidity.

Keywords: Clinical pattern, Infestation, Paediatric

INTRODUCTION

Pediatric dermatology deals with diseases and skincare needs in individuals from birth to adolescence, during which significant physiological, psychological, and maturity changes take place.[1] In the pediatric age group, skin diseases are a major health problem and they are associated with significant morbidity.[2] Thirty percent of all pediatricians' outpatient visits include dermatological conditions and 30% of all visits to dermatologists include children.[3-5] Pattern of pediatric dermatoses varies from country to country. In developed countries, the most common skin disease in the pediatric age group is eczema while infection and infestation are the most common skin disease in developing nations. Factors like poor socioeconomic status, overcrowded families, poor personal hygiene, lack of general awareness and lack of education makes prevalence higher in rural areas as compared to urban area.[6] An aim of studying the prevalence of pediatric dermatoses is to evaluate the availability of health care services and level of health awareness which is useful to build child healthcare strategies that deal with actual community requirements.[7] In many developing countries, skin diseases are the most frequent disease of school children. The school environment makes students vulnerable to the cross-transmission of communicable skin diseases which then can pass to among themselves and their families.[8] Scabies and pediculosis are the most common human infestations. Tolerance to standard therapies has been observed in cases

of scabies and head lice. The present study was undertaken to know the prevalence and patterns of infestations among the pediatric patients attending the dermatology outpatient department in a tertiary care hospital in Rajkot, Gujarat.

METHODS

This study was conducted in dermatology OPD of a tertiary care centre in Rajkot, between February 2020 and September 2020.

Inclusion criteria

All newly diagnosed, untreated male and female pediatric patients (from neonates to adolescents ≤14 years of age) attending dermatology OPD.

Exclusion criteria

Exclusion criteria were previously diagnosed and treated cases; patients not willing to consent for the study; patients in whom definite diagnosis cannot be arrived at.

Patients in the present study were grouped according to age – neonatal: birth to 29 days of life; infant: 1 month to 1 year of age; pre-school: 1-5 years of age; and school age: 6 to14 years

Informed verbal consent was taken from either of the patient's parents before including into the study. Detailed history was taken. Thorough general, systemic and cutaneous examination and relevant investigations were done. The collected data was tabulated and analysed.

RESULTS

A total of 50 cases having infestations were enrolled in this clinical study.

In the present study on the pediatric population, the majority of cases were school-going age group (58%), followed by pre-school children (34%), infants (6%) and least were neonates (2%) (Figure 1).

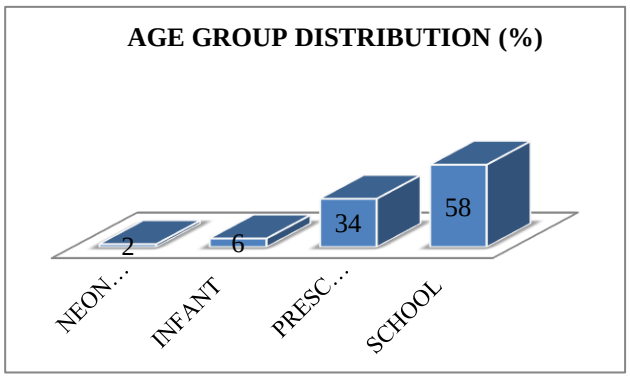

Figure 1: Age group distribution of infestations in the present study.

Males (52%) were affected marginally more than females (48%). Majority of the patients presented with symptoms of less than 6 weeks duration. The most common infestation encountered was scabies in 43 patients (86%) followed by Pediculosis capitis in 7 patients (14%) (Figure 2).

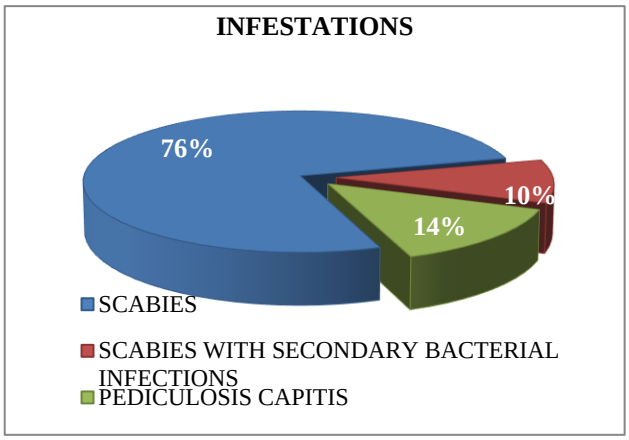

Figure 2: Etiological distribution of infestations.

Out of 43 total patients with scabies, 5 patients presented with a secondary bacterial infection. Among scabies-affected individuals (43 total patients) there were a total of 5 patients who were complicated with secondary bacterial infections. Papules and excoriation were the commonest morphological presentation in our study.

Morphologic pattern of infestations includes papules (79.3%), plaques (14.3%), excoriations (6%), erosion (3.4%) and crust (2.4%). Most patients belong to lower socioeconomic status. The clinical pattern observed in the study shows infestations were predominant among the school and preschool children as they are indulged in playing and contact with fellow peers or neighbours. Among scabies-affected individuals, there were 24 cases in the school-going age group (55.8%) and 15 cases in the preschool (34.8%) age group.

Similarly, pediculosis infestation was highest among the school-going-age group, 5 cases in school-going, and 2 cases in the preschool age group (Figure 3). The most common complaint noted was itching in 98.2% of patients and 1.8% of close contacts with lesions were asymptomatic.

Table 1: Etiological pattern of infestations in the present study.

Infestations	Total number of cases	Percentage
Scabies	38	76
Scabies with secondary infections	5	10
Pediculosis capitis	7	14

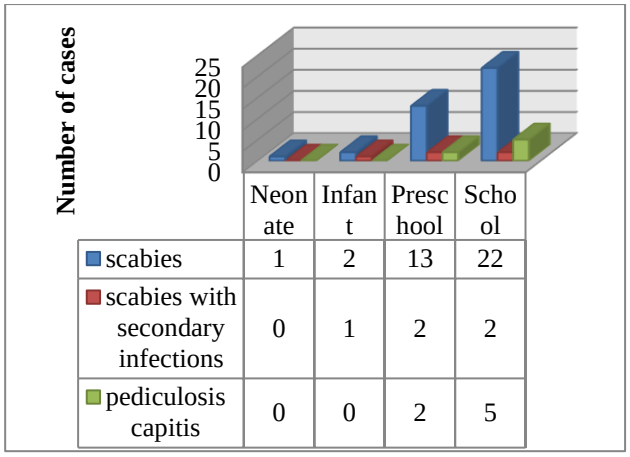

Figure 3: Association between different types of infestation and age group.

DISCUSSION

Infestations are perhaps the most well-known dermatoses that one experiences in the dermatological outpatient office particularly among the preschool and school-going age groups. The babies are for the most part limited to their homes though preschool kids are for the most part presented to their encompassing area. In school, contact between understudies makes them helpless against the cross-transmission of transmittable skin infections among themselves and their families. The predominance of infestations is higher in provincial regions when contrasted with metropolitan regions concerning poor financial status, poor personal hygiene, overcrowding, lack of general awareness, lack of education, sanitation, and specialized health facilities.[9] There are no comprehensive studies on the various clinical pattern infestations in Indian and Western literature.

The most well-known infestations in the current review were scabies then Pediculosis capitis followed by scabies with secondary bacterial infection comparable example was accounted for in Sharma et al.

Patients with scabies had nocturnal itching, similar complaints in family members, and distribution of the lesions helped to clinch the diagnosis in most of the cases, some required normal saline mount to demonstrate the scabies mite from the web space scraping. Chronic scratching many times results in eczematous changes. Secondary infection with gram-positive cocci was common in cases of scabies. Scabies is one of the potential risk factors for the development of post-streptococcal infection in children.[11] scabies cases reported in the study had similar clinical manifestations presenting with papules over web spaces and nodules over the genitals (Figure 4).

Pediculosis capitis is more prevalent in children than in older individuals, and most surveys suggest that girls are more likely to be infected than males. The incidence of infection most likely changes due to varied behavioural patterns in girls and males of different ages.[10] Girls' hair has a higher prevalence of nits as a result of varied hair lengths and close head-to-head contact. In the case of guys, more frequent hair trimming removes signs of the prior infestation.[12] In the context of pediculosis capitis, the clinical diagnosis was simple in most cases due to the presence of lice (Figure 5) and nits over the scalp hair with the naked eye and sometimes with normal saline mount (Figure 6).

Figure 4: Nodules over scrotum in a scabies patient.

Figure 5: Head lice and nits in a case of pediculosis capitis.

Figure 6: Microscopic demonstration of head lice on normal saline mount.

CONCLUSION

Patients diagnosed with infestations of scabies were treated with topical scabicide permethrin 5% cream once weekly overnight neck-to-toe application for the patient and their contacts. All the patients and their contacts were treated for a minimum of two consecutive weeks. Oral antihistamines and topical antibiotics were used in secondarily infected patients. Pediculosis patients were treated with topical permethrin 1% lotion over the scalp application with a contact time of 10 minutes and then advised for rinsing off, repeating after 7 days.

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Conflict of interest: None declared
Ethical approval: The study was approved by the institutional ethics committee

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